Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

PRELIMINARY NOTE ON A NEW ALKALI MINERAL.

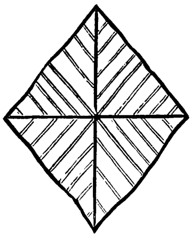
BY WARREN M. FOOTE.

While searching recently at Borax Lake, California, for the rare species Sulphohalite, Mr. C. H. Northup discovered what he considered to be a new form of that mineral.

The crystals were found during a laborious working of the tailings which came from an exploratory boring known as the "New Well," made by the Borax Lake Mining Company, and were formed in a clay which was reached at a depth of about 450 feet. They were at once forwarded to Dr. A. E. Foote, to whom the writer is indebted for the material used in this examination.

Crystallization, etc. — The mineral crystallizes in bright and perfect octahedrons of a diameter rarely exceeding one centimeter. Fractured crystals show in the interior a cross formed of faint lines running perpendicular to the octahedral faces. Dark planes (which were sharply defined in the interior of every specimen examined), lie parallel to cubic symmetry thus passing through the angles of the octahedron and dividing it into eight parts, each part containing a distinct group of striæ.

The same thing is noticeable in the clearest of the complete crystals, a bundle of lines coming from the central nucleus to the centre of each face. The accompanying sketch will give an idea of the interior structure as appearing in a broken crystal.



This remarkable phenomenon is strikingly similar to that observed in Boléite cubes (figured by Bombicci in a memoir on Mimetical

Pyrite, Bologna 1893). Again, triangular markings on the surface and a frequent parallel grouping of the octahedrons suggest a form of interpenetration twinning, where the twinning axis is cubic as in diamond.

Color, varying from milky, pale yellow and greenish gray to brown. Cleavage, imperfect. Fracture, brittle and uneven. Lustre, vitreous. Hardness, 3.5 to 4.

Chemical Examination.—Easily fusible. In a closed tube decrepitates violently and gives off water, finally fusing to a gray mass. Fragments and powdered mineral are almost unchanged by long standing in water and the powder soluble with difficulty on boiling. Readily soluble with effervescence in cold dilute hydrochloric acid. Qualitative tests made on clear crystals, showed the presence of carbon dioxide, chlorine and sodium with slight traces of calcium and potassium, making it essentially a *chlorocarbonate of sodium,* a composition quite as remarkable as that of other species peculiar to this locality.

Though found sparingly, it is hoped that material can be obtained for a further and more complete investigation than the writer is at present able to give.

The name NORTHUPITE is proposed for this new species, since it was entirely due to Mr. Northup's indefatigable zeal in collecting, that the mineral was brought to light.